

02/13/02

02-14-02

A

PTO/SB/05 (03-01)

Approved for use through 10/31/2002. OMB 0651-0032

U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

**UTILITY  
PATENT APPLICATION  
TRANSMITTAL**

(Only for new nonprovisional applications under 37 CFR 1.53(b))

Attorney Docket No.

BP 2003

First Inventor

Nabil R. Yousef

Title

CHANNEL ESTIMATION AND/OR EQUALIZATION  
USING REPEATED ADAPTATION

Express Mail Label No.

EL 873768317 US

**APPLICATION ELEMENTS**

See MPEP chapter 600 concerning utility patent application contents.

1. ☒ Fee Transmittal Form (e.g., PTO/SB/17)  
(Submit an original and a duplicate for fee processing)
2. ☐ Applicant claims small entity status.  
See 37 CFR 1.27.
3. ☒ Specification [Total Pages **53**]  
(preferred arrangement set forth below)
- Descriptive title of the invention
  - Cross Reference to Related Applications
  - Statement Regarding Fed sponsored R & D
  - Reference to sequence listing, a table, or a computer program listing appendix
  - Background of the Invention
  - Brief Summary of the Invention
  - Brief Description of the Drawings (if filed)
  - Detailed Description
  - Claim(s)
  - Abstract of the Disclosure
4. ☒ Drawing(s) (35 U.S.C. 113) [Total Sheets **18**]
5. ☐ Oath or Declaration [Total Pages **3**]
- a. ☒ Newly executed (original or copy) (printed on both sides)
- b. ☐ Copy from a prior application (37 CFR 1.63 (d))  
(for continuation/divisional with Box 18 completed)
- i. ☐ **DELETION OF INVENTOR(S)**  
Signed statement attached deleting inventor(s)  
named in the prior application, see 37 CFR  
1.63(d)(2) and 1.33(b).
6. ☐ Application Data Sheet. See 37 CFR 1.76

ADDRESS TO:

Assistant Commissioner for Patents  
Box Patent Application  
Washington, DC 20231

7. ☐ CD-ROM or CD-R in duplicate, large table or  
Computer Program (Appendix)
8. Nucleotide and/or Amino Acid Sequence Submission  
(if applicable, all necessary)
- a. ☐ Computer Readable Form (CRF)
- b. Specification Sequence Listing on:
- i. ☐ CD-ROM or CD-R (2 copies); or
- ii. ☐ paper
- c. ☐ Statements verifying identity of above copies

**ACCOMPANYING APPLICATION PARTS**

9. ☒ Assignment Papers (cover sheet & document(s))
10. ☒ 37 CFR 3.73(b) Statement (when there is an assignee) ☒ Power of Attorney
11. ☐ English Translation Document (if applicable)
12. ☐ Information Disclosure Statement (IDS)/PTO-1449 ☐ Copies of IDS Citations
13. ☐ Preliminary Amendment
14. ☒ Return Receipt Postcard (MPEP 503)  
(Should be specifically itemized)
15. ☐ Certified Copy of Priority Document(s)  
(if foreign priority is claimed)
16. ☐ Nonpublication Request under 35 U.S.C. 122  
(b)(2)(B)(i). Applicant must attach form PTO/SB/35  
or its equivalent.
17. ☐ Other: .....

18. If a CONTINUING APPLICATION, check appropriate box, and supply the requisite information below and in a preliminary amendment, or in an Application Data Sheet under 37 CFR 1.76:

☐ Continuation ☐ Divisional ☐ Continuation-in-part (CIP)

of prior application No.: \_\_\_\_\_ / \_\_\_\_\_

Prior application information.

Examiner: \_\_\_\_\_

Group Art Unit: \_\_\_\_\_

For CONTINUATION OR DIVISIONAL APPS only: The entire disclosure of the prior application, from which an oath or declaration is supplied under Box 5b, is considered a part of the disclosure of the accompanying continuation or divisional application and is hereby incorporated by reference. The incorporation can only be relied upon when a portion has been inadvertently omitted from the submitted application parts.

**19. CORRESPONDENCE ADDRESS**☐ Customer Number or Bar Code Label

(Insert Customer No. or Attach bar code label here)

or ☒

Correspondence address below

Name

Shayne X. Short, Ph.D.

Garlick Harrison &amp; Markison, LLP

Address

P.O. Box 160727

City

Austin

State

Texas

Zip Code

78716-0727

Country

United States

Telephone

(512) 825-1145

Fax

Fax1: (512) 394-0054  
Fax2: (512) 264-3735

Name (Print/Type)

Shayne X. Short, Ph.D.

Registration No. (Attorney/Agent)

45,105

Signature

SX Short

Date

02/13/2002

Burden Hour Statement: This form is estimated to take 0.2 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Box Patent Application, Washington, DC 20231.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

**FEE TRANSMITTAL**  
**for FY 2002**

Patent fees are subject to annual revision.

**TOTAL AMOUNT OF PAYMENT**(\$)**1830.00****Complete if Known**

Application Number	
Filing Date	
First Named Inventor	Nabil R. Yousef
Examiner Name	
Group Art Unit	
Attorney Docket No.	BP 2003

**METHOD OF PAYMENT**

1. ☐ The Commissioner is hereby authorized to charge indicated fees and credit any overpayments to:
- Deposit Account Number
- Deposit Account Name
- ☐ Charge Any Additional Fee Required Under 37 CFR 1.16 and 1.17
- ☐ Applicant claims small entity status. See 37 CFR 1.27
2. ☒ **Payment Enclosed:**
- ☒ Check ☐ Credit card ☐ Money Order ☐ Other

**FEE CALCULATION****1. BASIC FILING FEE**

	Large Entity	Small Entity	Fee Description	Fee Paid
Fee Code (\$)	Fee Code (\$)	Fee Code (\$)		
101 740	201 370		Utility filing fee	740.00
106 330	206 165		Design filing fee	
107 510	207 255		Plant filing fee	
108 740	208 370		Reissue filing fee	
114 160	214 80		Provisional filing fee	

**SUBTOTAL (1)** (\$)**740.00****2. EXTRA CLAIM FEES**

	Extra Claims	Fee from below	Fee Paid
Total Claims	69		
Independent Claims	5		
Multiple Dependent			

	Large Entity	Small Entity	Fee Description
Fee Code (\$)	Fee Code (\$)	Fee Code (\$)	
103 18	203 9		Claims in excess of 20
102 84	202 42		Independent claims in excess of 3
104 280	204 140		Multiple dependent claim, if not paid
109 84	209 42		** Reissue independent claims over original patent
110 18	210 9		** Reissue claims in excess of 20 and over original patent

**SUBTOTAL (2)** (\$)**1050.00**

\*\*or number previously paid, if greater; For Reissues, see above

**FEE CALCULATION (continued)****3. ADDITIONAL FEES**

	Large Entity	Small Entity	Fee Description	Fee Paid
Fee Code (\$)	Fee Code (\$)	Fee Code (\$)		
105 130	205 65		Surcharge - late filing fee or oath	
127 50	227 25		Surcharge - late provisional filing fee or cover sheet	
139 130	139 130		Non-English specification	
147 2,520	147 2,520		For filing a request for <i>ex parte</i> reexamination	
112 920*	112 920*		Requesting publication of SIR prior to Examiner action	
113 1,840*	113 1,840*		Requesting publication of SIR after Examiner action	
115 110	215 55		Extension for reply within first month	
116 400	216 200		Extension for reply within second month	
117 920	217 460		Extension for reply within third month	
118 1,440	218 720		Extension for reply within fourth month	
128 1,960	228 980		Extension for reply within fifth month	
119 320	219 160		Notice of Appeal	
120 320	220 160		Filing a brief in support of an appeal	
121 280	221 140		Request for oral hearing	
138 1,510	138 1,510		Petition to institute a public use proceeding	
140 110	240 55		Petition to revive - unavoidable	
141 1,280	241 640		Petition to revive - unintentional	
142 1,280	242 640		Utility issue fee (or reissue)	
143 460	243 230		Design issue fee	
144 620	244 310		Plant issue fee	
122 130	122 130		Petitions to the Commissioner	
123 50	123 50		Processing fee under 37 CFR 1.17(q)	
126 180	126 180		Submission of Information Disclosure Stmt	
581 40	581 40		Recording each patent assignment per property (times number of properties)	40.00
146 740	246 370		Filing a submission after final rejection (37 CFR § 1.129(a))	
149 740	249 370		For each additional invention to be examined (37 CFR § 1.129(b))	
179 740	279 370		Request for Continued Examination (RCE)	
169 900	169 900		Request for expedited examination of a design application	

Other fee (specify) \_\_\_\_\_

\*Reduced by Basic Filing Fee Paid

**SUBTOTAL (3)** (\$)**40.00****SUBMITTED BY**

Name (Print/Type)	Shayne X. Short, Ph.D.	Registration No. (Attorney/Agent)	45,105	Telephone	(512) 825-1145
Signature	<i>SX Short</i>			Date	02/13/2002

**WARNING: Information on this form may become public. Credit card information should not be included on this form. Provide credit card information and authorization on PTO-2038.**

Burden Hour Statement: This form is estimated to take 0.2 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.

# COPY

PTO/SB/17 (10-01)

Approved for use through 10/31/2002. OMB 0651-0032  
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

## FEE TRANSMITTAL for FY 2002

Patent fees are subject to annual revision.

### Complete if Known

Application Number	
Filing Date	
First Named Inventor	Nabil R. Yousef
Examiner Name	
Group Art Unit	
Attorney Docket No.	BP 2003

**TOTAL AMOUNT OF PAYMENT (\$)** 1830.00

### METHOD OF PAYMENT

1. ☐ The Commissioner is hereby authorized to charge indicated fees and credit any overpayments to:
- Deposit Account Number
- Deposit Account Name
- ☐ Charge Any Additional Fee Required Under 37 CFR 1.16 and 1.17
- ☐ Applicant claims small entity status See 37 CFR 1.27
2. ☒ **Payment Enclosed:**
- ☒ Check ☐ Credit card ☐ Money Order ☐ Other

### FEE CALCULATION

#### 1. BASIC FILING FEE

Large Entity		Small Entity		Fee Description	Fee Paid
Fee Code (\$)	Fee Code (\$)	Fee Code (\$)	Fee Code (\$)		
101	740	201	370	Utility filing fee	740.00
106	330	206	165	Design filing fee	
107	510	207	255	Plant filing fee	
108	740	208	370	Reissue filing fee	
114	160	214	80	Provisional filing fee	

**SUBTOTAL (1) (\$)** 740.00

#### 2. EXTRA CLAIM FEES

Total Claims		Extra Claims		Fee from below		Fee Paid	
69	-20** =	49	X	18.00	=	882.00	
5	-3** =	2	X	84.00	=	168.00	
Multiple Dependent							

Large Entity		Small Entity		Fee Description
Fee Code (\$)	Fee Code (\$)	Fee Code (\$)	Fee Code (\$)	
103	18	203	9	Claims in excess of 20
102	84	202	42	Independent claims in excess of 3
104	280	204	140	Multiple dependent claim, if not paid
109	84	209	42	** Reissue independent claims over original patent
110	18	210	9	** Reissue claims in excess of 20 and over original patent

**SUBTOTAL (2) (\$)** 1050.00

\*\*or number previously paid, if greater; For Reissues, see above

### FEE CALCULATION (continued)

#### 3. ADDITIONAL FEES

Large Entity		Small Entity		Fee Description	Fee Paid
Fee Code (\$)	Fee Code (\$)	Fee Code (\$)	Fee Code (\$)		
105	130	205	65	Surcharge - late filing fee or oath	
127	50	227	25	Surcharge - late provisional filing fee or cover sheet	
139	130	139	130	Non-English specification	
147	2,520	147	2,520	For filing a request for ex parte reexamination	
112	920*	112	920*	Requesting publication of SIR prior to Examiner action	
113	1,840*	113	1,840*	Requesting publication of SIR after Examiner action	
115	110	215	55	Extension for reply within first month	
116	400	216	200	Extension for reply within second month	
117	920	217	460	Extension for reply within third month	
118	1,440	218	720	Extension for reply within fourth month	
128	1,960	228	980	Extension for reply within fifth month	
119	320	219	160	Notice of Appeal	
120	320	220	160	Filing a brief in support of an appeal	
121	280	221	140	Request for oral hearing	
138	1,510	138	1,510	Petition to institute a public use proceeding	
140	110	240	55	Petition to revive - unavoidable	
141	1,280	241	640	Petition to revive - unintentional	
142	1,280	242	640	Utility issue fee (or reissue)	
143	460	243	230	Design issue fee	
144	620	244	310	Plant issue fee	
122	130	122	130	Petitions to the Commissioner	
123	50	123	50	Processing fee under 37 CFR 1.17(q)	
126	180	126	180	Submission of Information Disclosure Stmt	
581	40	581	40	Recording each patent assignment per property (times number of properties)	40.00
146	740	246	370	Filing a submission after final rejection (37 CFR § 1.129(a))	
149	740	249	370	For each additional invention to be examined (37 CFR § 1.129(b))	
179	740	279	370	Request for Continued Examination (RCE)	
169	900	169	900	Request for expedited examination of a design application	

Other fee (specify) \_\_\_\_\_

\*Reduced by Basic Filing Fee Paid

**SUBTOTAL (3) (\$)** 40.00

### SUBMITTED BY

Name (Print/Type)	Shayne X. Short, Ph.D.	Registration No. (Attorney/Agent)	45,105	Telephone	(512) 825-1145
Signature		Date	02/13/2002		

**WARNING: Information on this form may become public. Credit card information should not be included on this form. Provide credit card information and authorization on PTO-2038.**

Burden Hour Statement: This form is estimated to take 0.2 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.